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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

15 October 1975

MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT : MILITARY THOUGHT (USSR): Air Support
of the Ground Forces

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. This article reviews the results of 1961 exercises in dealing with the question of employing fighter-bomber aviation to provide continuous air support to front ground forces, particularly tank large units, in a rapid and deep offensive operation. Remaining problems include the capture and restoration of enemy airfields, the improvement of dirt airfields, and support to the rebasing and combat actions of the aircraft. The author recommends the use of airfield servicing helicopter groups and heliborne air army and air division command posts to improve control. Airfield technical support units must be reorganized and their equipment standardized to meet the requirements of mobile warfare. This article appeared in Issue No. 4 (65) for 1962.

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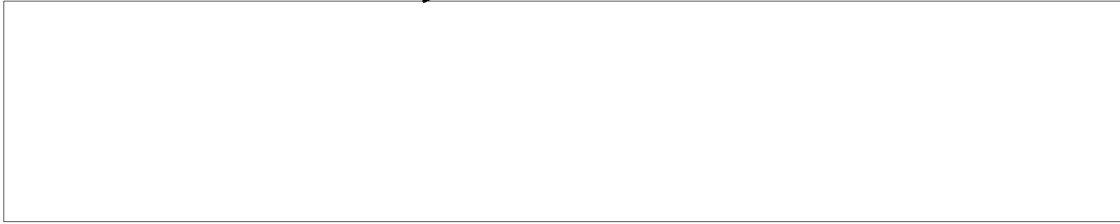
2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned

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William E. Nelson
Deputy Director for Operations

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Intelligence Information Special Report

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COUNTRY USSR

DATE OF
INFO. Mid-1962

DATE 15 October 1975

SUBJECT

MILITARY THOUGHT (USSR): Air Support of the Ground Forces

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 4 (65) for 1962 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. The author of this article is General-Leytenant of Aviation R. Kontsevoy. This article reviews the results of 1961 exercises in dealing with the question of employing fighter-bomber aviation to provide continuous air support to front ground forces, particularly tank large units, in a rapid and deep offensive operation. Remaining problems include the capture and restoration of enemy airfields, the improvement of dirt airfields, and support to the rebasing and combat actions of the aircraft. The author recommends the use of airfield servicing helicopter groups and heliborne air army and air division command posts to improve control. Airfield technical support units must be reorganized and their equipment standardized to meet the requirements of mobile warfare.

End of Summary

Comment:

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Portions of some lines of the original document are missing. After 1962 the SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970

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Air Support of the Ground Forces
by
General-Leytenant of Aviation R. Kontsevoy

For conducting offensive operations of a front under present-day conditions, the establishment of powerful groupings that include a large number of tank large units capable of quickly effecting the defeat of the enemy and successfully developing the offensive at high speeds should be considered characteristic. The air army, in conformity with the concept of the operation, supports the swift, uninterrupted forward movement of the troops of the front and, first of all, the tank formation or the tank large units.

Front aviation, being an inseparable part of the troops of the front, supports them in all types of combat activity: on the march, in regroupings, in the offensive, in pursuit of a withdrawing enemy; that is, it constantly assists the ground forces in every way possible in the accomplishment of the tasks assigned to them. In the article "Air Actions in the First Front Offensive Operation",* a wide range of questions connected with air support of ground troops in the beginning and during the course of the first offensive operation are treated in a general presentation. Without getting into the details of the questions touched upon in the article mentioned, we shall look at the air support of troops by the forces of fighter-bomber aviation, showing its capabilities.

In the initial period of a war, when the combat actions of troops are being developed along separate axes, at high speeds, with drastic changes in the situation, and with considerable gaps between the large units (formations) of the front, air support of troops is one of the most important and most complicated tasks of fighter-bomber aviation. It is quite obvious that the main thing in the support of troops will be skilful organization of the combat actions of the fighter-bombers and accomplishment by them of the tasks of immediately destroying enemy missile/nuclear weapons and other means of mass destruction detected by all types of reconnaissance, as well as independently detecting them in the course of conducting combat actions.

*Collection of Articles of the Journal "Military Thought", No. 5 (60), 1961.

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The ground forces will begin to experience a need for air support from the very beginning of the offensive, and subsequently, with the development of the operation and the swift advance of troops, this need will grow, since part of the means of fire support and the missile subunits will not always keep up with the troops. Tank formations (large units) operating at a considerable distance from the other forces of the front will especially need air support. In this connection, the Minister of Defense of the USSR has presented front aviation with a task; continue improving and mastering the methods of continuous air support of the troops of the front in mobile operations carried out by them at high speeds. This places special responsibility on the commander and staff of the air army to research and master the most effective methods of combat actions and to solve the whole complex of problems of continuous air support of the ground forces by the forces of fighter-bomber aviation. However, the actual accomplishment of this task meets with a whole series of serious difficulties under present-day conditions.

The employment of missile/nuclear weapons and the increased mobility of enemy troops have led to an increase in the depth of disposition of the targets of the actions in both the tactical and the operational zone. This in turn has affected the nature of organizing the combat actions of fighter-bombers and their accomplishment of tasks. It is now required of fighter-bombers that they change their airfield basing more frequently, that part of their forces be constantly at airfields in an increased state of combat readiness, and that another part of their forces conduct continuous combat actions by the method of free search ('hunting'), with immediate destruction of the enemy nuclear means detected; higher demands are also made on control, especially in organizing the cooperation of the fighter-bombers with the missile units of the front.

At the present time there exist different opinions about the employment of fighter-bombers in supporting the ground forces. Many consider it advisable to employ fighter-bomber aviation for hitting targets in the operational depth and in the strip of the tactical zone adjacent to it, i.e., beyond the range of tactical missiles and field artillery. At the same time, some commanders of combined-arms large units believe it advisable to concentrate the efforts of the fighter-bombers on destroying the important targets located principally in the tactical zone.

We consider that fighter-bomber aviation, as the basic means of destroying mobile targets, has to operate in both the tactical and operational depth; support of the ground forces of the front in depth will always have a twofold character -- tactical and operational. The relative

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proportion of fighter-bomber actions in tactical and operational cooperation will always be different; it is determined by the conditions of the specific situation in the offensive zone of the troops of the front.

One of the most important requirements imposed by the combined-arms commander upon the fighter-bombers in the providing of continuous air support is the speed of their appearance over the target. They have specific capabilities for this. Depending on the distance of basing airfields, fighter-bombers taking off upon request from airfield alert status are capable of delivering strikes in the tactical and immediate operational depth within 20 to 30 minutes after being requested by radio from the air army commander's command post located near the command post of the commander of troops of the front. This is confirmed by the experience of exercises. In an exercise of tank large units and the fighter-bomber aviation of the air army of the Northern Group of Forces conducted in November 1961, MIG-17 fighter-bombers taking off upon request from airfield alert status carried out practice bombing, and rocket firing and cannon firing against targets in the tactical zone within 17 to 28 minutes after being requested.

However, fighter-bombers will not always manage to appear quickly even in the tactical zone. The rapid offensive of the troops of a front and the limited airfield maneuvering of the aviation (because of the slow preparation of airfields) will lead to a lowering of the effectiveness of air support. Therefore, in the most crucial periods of the operation, in order to destroy newly detected missile/nuclear means immediately, an airborne alert status must be established for part of the fighter-bomber forces. This will increase the speed of their appearance over a target, but, at the same time, it will require greater expenditure of forces and will reduce the radius of combat actions.

In connection with the maneuverable nature of combat actions and the great mobility of the targets being acted against, fighter-bombers will sometimes adopt, besides the methods indicated above, independent search and destruction of targets ('hunting'). This method has its advantages. 'Hunters' are the most trained fliers, more capable than others of searching out and destroying important targets, primarily missile/nuclear means. The method of 'free hunting' will, to a certain extent, contribute to a broader scope of air support of the troops in an offensive operation and ensure its continuity.

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In the course of air support of the troops, the basic targets of fighter-bomber actions will be missile/nuclear weapons and their support

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elements, individual centers of resistance and strong points, control posts and radiotechnical means of control, reserves on the move, and the nearest transportation centers.

In air exercises conducted jointly with exercises of the ground forces, we have been able to partially test the capabilities of fighter-bombers for continuous support of tank large units actually carrying out an offensive to a depth up to 420 kilometers at speeds of 80 to 100 kilometers per day. Characteristic in this respect is the experience of an air exercise of fighter-bombers conducted jointly last year with the tactical exercise of a tank large unit belonging to the Northern Group of Forces. In conducting the exercise we strove to reduce simulations to a minimum, although construction of new airfields and a number of other measures for the organization and conduct of the combat actions of fighter-bombers were not carried out. However, on the basis of a proper evaluation of the results, objective conclusions have been drawn.

Studying the question of continuous air support of tank large units by fighter-bombers theoretically and testing it practically, we ran into a whole series of difficulties. We shall dwell on them briefly. Experience of exercises has shown that the combat actions of fighter-bombers from the initial basing airfields were most timely on the first day, and then on the third or fourth day, when the air regiments had been rebased from old to new airfields.

On these days of the operation, air support
Aviation could use all kinds
bombs, rockets and cannon
half of the third day (before rebasing
bombers could use only rockets
wing tanks in the target area) and
of the fighter-bomber
of the troops are shown in Diagram 1.

We will note that rebasing
forward airfields
out of operation, and also
restoration. In
were able to be
For their restoration
of time, which
support
In connection with

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airfield
front
 accomplish

for
 theater
 that in
 fighter-bomber
 MIG-17, the second
 distant from the line
 analysis of the experience of conducted
 bombers are capable
 operation to carry out air
 advancing at a rate of 80 to 100 kilometers
 support will be different. Thus, on the second
 they will be able to conduct combat actions using
 On subsequent days the employment of fighter-bombers
 significantly limited because of the difficulty

The basing of large units and units of the air army (missing) the offensive operation of the front presents a complex problem. It may be solved by capture of enemy airfields by the ground forces, primarily by the tank large units, by (missing) airfields with a small amount of engineer work (missing) sections of highways in place of airfields, and to a lesser degree on (missing) by means of constructing new, mainly dirt airfields and, in part, airfields with metal runways. But, obviously, it will be simplest of all to use sections of highways as airfields, inasmuch as this requires a very small amount of supplementary engineer work (without constructing bypasses, about one battalion-day is needed to prepare runways after the surfacing of the highway). And it is necessary to give serious attention to this possibility. It is necessary already in peacetime to conduct careful and systematic engineer reconnaissance of the highways, existing and under construction, within the Western Theater of Military Operations. Besides this, it is possible to count on capturing airfields in good repair from the enemy.

From the actual situation of airfield in Germany, it is evident that in the offensive zone possible to capture every day 9 to 12 airfields naturally, will be put out of operation, but part used by our aviation. The required number air army will directly depend on rebasing of air divisions of fighter-bomber

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operation. Study of this questions leads to the conclusion of detailed planning of the rebasing of front ground forces have been able to obtain before and during swiftly accomplish the task of capturing airfields. We will note that the decision to capture enemy airfields must be made by the commander of troops of the front working out the operational decision. During the operation inasmuch as part of the airfields subject to capture degree destroyed by strikes of the forces of the front in defeating enemy groupings or with a change in the situation for us.

Besides this, some airfields, even with offensive of our troops, will be put out of operation. Considering that up to 30 to 40 percent of the captured airfields for restoration on the average up to one battalion-day restoring to operation such a number of airfields four to five airfield engineer battalions. of the air army there must be not less than eight to ten airfield engineer battalions, of which half will be occupied restoration work on the captured airfields half will move behind the troops and be used mainly construction of new airfields.

Front command-staff exercises conducted that to the extent our troops advance, the quantity basing of the aviation of the air army will be reduced this will mean that on the third day of the operation support of the ground forces may be carried out two air regiments of fighter-bombers. diagram of the use of fighter-bomber in support of the ground forces are shown in Diagram 2.

Combat actions in support of the ground forces with small groups of fighter-bomber pairs and even individual aircraft. In the first place, tactical radius of the aircraft, reduces guarantees relatively simple organization capabilities for continuous air support great strength of the groups facilitates considerably the accomplishment and destruction of targets, antiaircraft weapons evasion fighter evasion maneuvering, and on the whole ensures effective negotiation of enemy air defense means;

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armament of aircraft permits them, with a small
accomplish the task of destroying (neutralizing)
targets for fighter-bombers.

The conduct of combat actions by fighter-bombers
low altitudes will increase the probability of penetrating
to strike targets, but carrying out attacks by various methods
will permit full utilization of the power of onboard armament and will
ensure more reliable destruction of enemy targets. However, using various
methods of action by aircraft will not lead to a great increase in the
scope of air support. The effectiveness of air support can be improved
mainly by increasing the capabilities of airfield maneuvering.

In connection with what has been set forth above, the solution of the
question of continuous air support of the ground forces with the forces of
fighter-bombers should be approached only after a comprehensive study and
evaluation of available capabilities. Having the MIG-17 and SU-7B aircraft
now in service with fighter-bomber aviation, we still will not be able to
accomplish the task of continuous air support of the troops.

Detailed calculations lead to the conclusion that accomplishing this
task for the entire offensive operation of the front meets with significant
difficulties. And these difficulties are not merely connected with the
airfield engineer support of the units of fighter-bomber aviation, but they
are also caused by the inadequate operating radius of the aircraft. Since
the operating radius of the existing types of fighter-bombers at the most
probable altitudes (200 to 500 meters) will be relatively short, and the
rate of an offensive in modern operations is 80 to 100 kilometers per day,
rebased part of the forces of the fighter-bomber aviation is required
already by the end of the first day of the operation, and of the rest of
the forces on the second day of the operation. This means that in two
days, under conditions in which one air regiment is based on an airfield,
six airfields must be prepared for fighter-bombers alone. Of these, at
least three must have surfaced runways, inasmuch as the SU-7B cannot for
now conduct systematic actions from dirt airfields.

In order to ensure solution of the basing problem, in our view, we
should take the path of developing take-off and landing equipment for the
existing aircraft in service which will permit them to take off (and land)
from dirt strips of limited dimensions. Together with this, mass adoption
of fast-hardening chemical compounds that provide the compacting of dirt
runways in a short time is necessary. Successful solution of the problem
of basing will permit development of speedy construction of airfields with
relatively small forces and means.

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Also an important problem is timely support of the rebasing of air regiments of fighter-bombers and of their conducting of combat actions from the new airfields during an offensive operation. It seems advisable to have airfield servicing helicopter groups. In each such group it is necessary to have three or four helicopters, equipping one of them with a homing radio station and an ultra-shortwave radio direction-finder, the second with a landing approach radar, the third with a command radio station, and using the fourth to transport the lighting equipment for the landing systems. The high mobility of the group will achieve control of the aviation and continuous air support.

It is also required to increase the mobility of command posts, especially the command posts of commanders of fighter-bomber divisions. The mobile command posts now available in the air armies do not fully meet the requirement of achieving continuous control under conditions of conducting mobile combat actions and a high-speed offensive. The motor transport means in which these posts are set up have little cross-country capability, are cumbersome and, in connection with this, not very maneuverable. Radiotechnical means are especially heavy and low in mobility. The command posts of air divisions meet this requirement even less. In order to organize continuous control and cooperation with the ground forces, the forward command posts of commanders of fighter-bomber divisions must be highly mobile and possess good mobility under bad road conditions.

The idea of establishing command posts set up in helicopters, in our opinion, deserves approval and implementation. In doing so, it is advisable to have such posts for both the air army and the air divisions. The quantity of helicopters needed for establishing these mobile command posts can be determined after special study of this question and practical testing of it in exercises.

Having a great influence on the accomplishment of the task of continuous air support of the ground forces is materiel and airfield technical support. For materiel and airfield technical support of the combat actions of fighter-bombers during an offensive operation, it is necessary to divide the airfield technical support battalions of the air regiment into two elements, one of which will service the air regiment and the second will be transferred for support at the new airfield. We have enough experience with the operating of the special airfield technical support battalions in two elements. Analysis of the use of the special

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airfield technical support battalions according to the experience of an exercise in 1961 shows that, in the first place, all special airfield technical support battalions (except the reserves) were forced during the offensive operation to operate in two elements. Secondly, from 40 to 60 percent of these elements were on the move every day, spending up to 30 percent of the time in relocating. Thirdly, of the total number of special airfield technical support battalions available in the complement of the air army, there was not one which could support one and the same air regiment during the course of the entire operation.

The existing table of organization of the special airfield technical support battalions requires revision to bring it into conformity with the requirements of modern mobile warfare. Airfield technical support battalions must have such a composition as would permit dividing them into two elements capable of independently supporting the combat activity of air units for a long time. In view of the fact that, during the course of an offensive operation, the battalions will, as a rule, service air regiments equipped with different types of aircraft, it is already necessary to find a practical solution now to the matter of standardizing the means for airfield equipping and for servicing of flights, power plants, and means of fueling and starting. It is necessary to maximally increase the mobility of the battalions by providing them with fast-moving equipment, soft containers for fuels and lubricants, and light dismountable equipment.

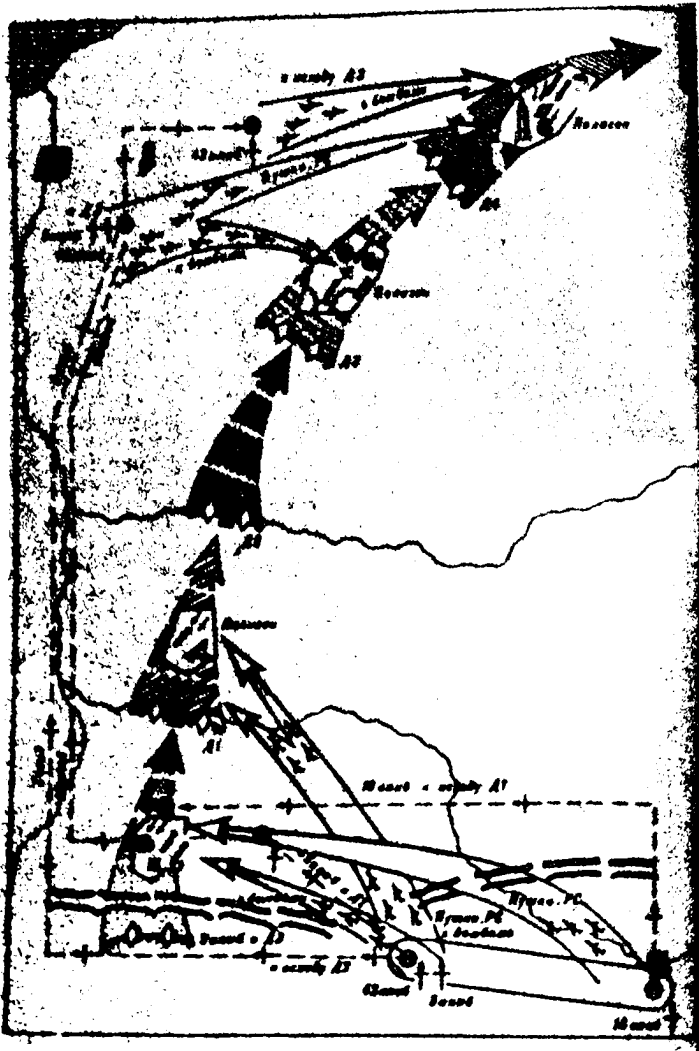
The questions reviewed do not, by any means, exhaust the entire content of the very important task of continuous air support of the ground forces by fighter-bombers. But posing and correctly solving them can, in our opinion, promote the research, development and practical mastery of more perfect forms of organizing and methods of conducting combat actions by fighter-bombers.

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LEGEND

К ИСХОДУ [Д1, Д2, Д3]	BY THE END OF [DAY 1, ETC.]
[3, 18, 42] АЛИБ	[3RD, ETC.] FIGHTER-BOMBER AIR REGIMENT
ПОЛИГОН	RANGE [FOR BOMBING AND FIRING]
ПУШКИ	CANNON
РС	ROCKETS
С БОМБАМИ	WITH BOMBS

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Diagram 1. Actions and maneuver of fighter-bomber aviation during air support of the troops.

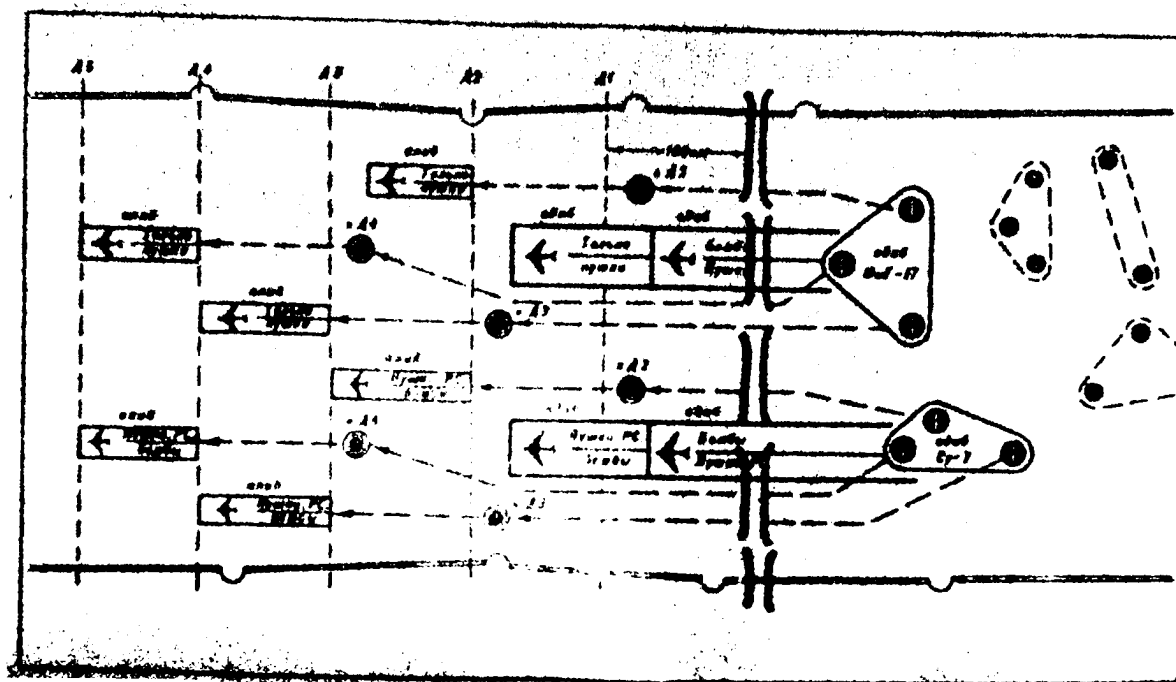
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LEGEND

АЛИБ	FIGHTER-BOMBER AIR REGIMENT
ТОЛЬКО ПУШКИ	ONLY CANNON
ПУШКИ, РС, БОМБЫ	CANNON, ROCKETS, BOMBS
БОМБЫ, ПУШКИ	BOMBS, CANNON
К [Д2, Д3, Д4]	BY [DAY 2, ETC.]
100 КМ	100 KILOMETERS
АЛИБ МИГ-17	MIG-17 FIGHTER-BOMBER AIR REGIMENT
АЛИБ СУ-7	SU-7 FIGHTER-BOMBER AIR REGIMENT



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Diagram 2. Employment of fighter-bomber aviation in support of the ground forces in an offensive operation of a front.

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